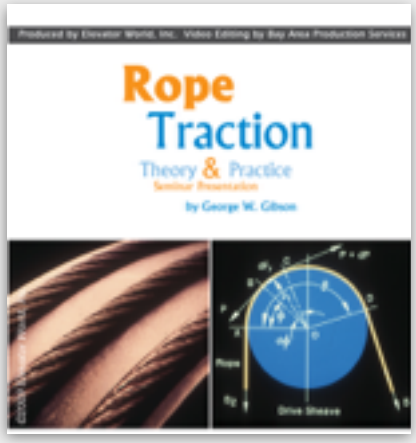
Rope Traction: Theory & Practice



3.0 contact hours credit (.3 CEUs)

Approved by:

- National Association of Elevator Contractors for CET®/CAT®
- NAESA for QEI
- States of: Alabama, Florida, Georgia, Kentucky, Pennsylvania, Virginia, Washington and West Virginia

Program Materials

This is a DVD that combines both a live speaker and a Power Point program developed by George Gibson. It lasts approximately two (2) hours, however, the topic is quite dense and requires additional review and study to pass the exam and obtain continuing education time credit. If a person wants to receive credit for the course he/she must take a 20-question online exam.

Learning Objectives & Curriculum

A person studying this course should:

• Have developed a basic understanding of the principles of rope traction, specifically, that the amount of available traction between the suspension (hoist) ropes and grooves must always exceed the required traction to move the hoistway masses in a controlled and safe manner.

• Have developed a basic understanding that the amount of available traction between the drive sheave grooves and suspension ropes is a function of the actual coefficient of friction between them, the groove shape, and the arc of contact that the ropes make as they wind over the drive sheave between their entry and exit points.

• Understand that the major inherent safety feature of a traction drive is its ability to lose traction if either the car or counterweight bottoms on its buffer.

• Understand that the type of rope lubricant is important, and that it affects the available traction between the suspension ropes and drive sheave grooves.

• Have developed a basic understanding of the construction, terminology and characteristics of suspension (hoist) members, primarily steel wire ropes, and to a lesser degree, non-metallic ropes and coated steel belts.

• Understand that the number and size of hoist ropes on any elevator is a function of the strength of the ropes and the factor of safety, and that the groove pressures developed between the ropes and groove surfaces is influenced by several parameters.

Who should take the course?

This course is suitable for: engineers; field technicians who install traction machinery; consultants, and inspectors who approve or specify traction elevator systems; and CET candidates or NEIEP students who are past the first year of study.

Course Specifics

• **Three contact hours (0.3 CEU)** of credit is awarded to anyone who takes the course and passes the 20-question online exam.

• The price of the DVD is $65.00 (non subscriber) / $55.25 (subscriber). Cost for taking the exam: $70.00 (non subscriber) / $59.50 (subscriber).

•Applicants will be allowed one free retake of the exam. Subsequent retakes will be $25.00 each.

•The testing company is **Exambuilder.com**. All testing will be on its server, and Elevator World will be charged for each person taking the exam. A database of persons taking the test, along with their scores and dates, will be

- kept at Exambuilder.com and at Elevator World. All pertinent information will be kept in a database for a minimum of seven years.
- After the test is taken the student will be able to determine immediately if he or she passed or failed. ***A passing score is 80%.*** A certificate of completion may be printed by the candidate.

Instructor Qualifications/Bio

George W. Gibson is the president of George W. Gibson & Associates, Inc., an elevator consulting firm specializing in elevator technology, strategic technical planning, codes and standards, product safety, and technical support of litigation. Prior to founding his own company, Gibson had a 37-year career with Otis, where he held several design engineering, engineering management and corporate management positions. He is the chairman of the Advisory Board of NAESA International, a past regent of the Elevator Escalator Safety Foundation, a member of the Board of Executives of the International Association of Elevator Engineers, and a member of the board of directors of Elevator World, Inc. He is a founding member of the OEI Standards Committee. He is a member of the American Society of Mechanical Engineers (ASME), where he has served as chairman on a number of committees and on its board of directors. In his role as chairman of the ASME A17 International Standards Committee, he has been the head of the U.S. delegation to the International Standards Organization Technical Committee 178 on Elevators and Escalators since 1981. In 1997, he was the recipient of the ASME Codes and Standards Medal, and was awarded the ASME grade of fellow, and the ASME Dedicated Service Award in 2007.

Provider Information

Elevator World, Inc. is the largest publisher in the world devoted to the elevator industry: publishing a monthly journal; compiling the Elevator World SOURCE©, the most inclusive directory in the industry; publishing numerous books used for industry education; maintaining ELENET, a biweekly email newsletter; and developing the Elevator World online network, a group of specialized websites with more than 70,000 users a month. Elevator World is the publisher and distributor of the print-based materials for the four-year Certified Elevator Technician (CET) Education Program. The company is 62 years old and has played a key role in the transfer of knowledge in the vertical-transportation industry.

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